

## CLAIMS

What is claimed is:

- 1 1. A processor comprising:
- 2 a first port to receive a supply voltage from an external voltage regulator,
- 3 the supply voltage to power the processor;
- 4 a voltage sensor to monitor the supply voltage; and
- 5 a second port to provide a control signal from the voltage sensor to the
- 6 voltage regulator to indicate if the supply voltage is above or below a
- 7 target value.
- 1 2. The processor of claim 1, wherein the target value is adjustable by the
- 2 processor in accordance with a power management policy.
- 1 3. The processor of claim 1, wherein the target value is to be set to allow the
- 2 processor to meet a timing requirement.
- 1 4. The processor of claim 1, wherein the target value is to be reduced if the
- 2 circuit is inactive.
- 1 5. The processor of claim 1, wherein the voltage sensor includes an op amp.
- 1 6. The processor of claim 1, wherein the circuit includes at least a portion of a
- 2 core of the processor.

Sub A<sup>2</sup>

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1 7. The processor of claim 1, wherein the circuit includes a memory region.

1 8. The processor of claim 7, wherein the memory region is a cache.

1 9. A computer system comprising:

2 a discrete voltage regulator to provide a supply voltage; and

3 a processor, powered by the supply voltage, to provide a control signal to

4 the voltage regulator to indicate a target value for the supply voltage.

1 10. The computer system of claim 9, wherein the target value is to be adjusted by  
2 the processor in accordance with a power management policy.

1 11. The computer system of claim 9, wherein the target value is to be set to allow  
2 the processor to meet a timing requirement.

1 12. The computer system of claim 9, wherein the target value is to be reduced if  
2 at least a portion of the processor is inactive.

1 13. The computer system of claim 9, wherein the target value is to be indicated  
2 by the control signal by indicating if the supply voltage is above or below the  
3 target value.

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Sub A1

1 14. The computer system of claim 9, wherein the processor includes a voltage  
2 sensor to monitor the supply voltage and to provide the control signal, the  
3 voltage sensor including an op amp.

1 15. A method comprising:  
2 enabling a voltage regulator to provide Vcc to a processor;  
3 enabling the processor to receive Vcc from the voltage regulator and to  
4 send a control signal associated with Vcc to the voltage regulator, the  
5 control signal to indicate a target value; and  
6 enabling the voltage regulator to receive the control signal from the  
7 processor, the voltage regulator to adjust Vcc to the target value in  
8 response to the control signal.

1 16. The method of claim 15, wherein enabling the voltage regulator to provide  
2 Vcc to the processor includes electrically coupling a Vcc output of the voltage  
3 regulator to a Vcc input of the processor.

1 17. The method of claim 15, wherein enabling the voltage regulator to receive the  
2 control signal from the processor includes electrically coupling a Vcc control  
3 output of the processor to a Vcc control input of the voltage regulator.

1 18. The method of claim 15, further comprising reducing the target value if at  
2 least a portion of the processor is inactive.